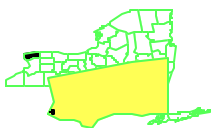


HOOKER - HYDE PARK NEW YORK

EPA ID# NYD000831644



EPA REGION 2
CONGRESSIONAL DIST. 29
Niagara County
Northwest of the City of Niagara Falls

Other Names:
Hyde Park Landfill

Site Description

Hooker-Hyde Park is a 15-acre site that was used to dispose of approximately 80,000 tons of waste, some of it hazardous material, from 1953 to 1975. The landfill is immediately surrounded by several industrial facilities and property owned by the New York Power Authority. The Niagara River, which flows into Lake Ontario, is located 2,000 feet northwest of the site. Bloody Run Creek, the drainage basin for the landfill area, flows from the northwestern corner of the landfill. The creek eventually flows into storm sewers and down the Niagara Gorge Face into the Niagara River. The site is located a few blocks east of a 500-home residential community. Approximately 3,000 people are employed by the industries near the site. All of the industries and residences are connected to a municipal water supply system.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/01/82

Final Date: 09/01/83

Threats and Contaminants



The ground water is contaminated with volatile organic compounds (VOCs) and dioxin from former disposal activities. Bloody Run Creek sediments were contaminated with VOCs until their removal in 1993 and surface water of the Niagara Gorge Face was contaminated with VOCs. Potential health threats include the consumption of contaminated fish from Lake Ontario. Although groundwater is contaminated, there are no known uses of groundwater within the area, so it is unlikely that people would be exposed to groundwater contaminants. Access to the landfill is restricted by a fence with a locked gate.



Cleanup Approach

The site is being addressed in a single long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Entire Site: In 1985, EPA selected cleanup remedies which include the following: (1) a source control extraction well system to remove non-aqueous phase liquids (NAPL) from the overburden in the landfill; (2) an overburden drain system surrounding the landfill; (3) a bedrock remedial system to prevent the migration of leachates comprised of (a) a NAPL plume containment system and (b) an aqueous phase liquid (APL or contaminated leachate) plume containment system; (4) a shallow and deep groundwater study; (5) a Niagara Gorge seep program; and, (6) the treatment of leachates. The potentially responsible party, Occidental Chemical Corporation (OCC), has implemented these remedies since 1985. Six source control wells were installed in 1993 and 1994. The Overburden Barrier Collection System, a drain surrounding the landfill to collect and contain leachate, was completed in 1990. This drain system prevents leachate from migrating outwardly through the overburden from the landfill. The bedrock NAPL containment system is a system of 17 extraction wells that recover APL and NAPL from the bedrock which are then transported to the treatment plant via a force main. Pumping these wells creates an inward hydraulic gradient (groundwater flow) towards the landfill which prevents the outward migration of leachate in the bedrock, while collecting the leachate for treatment. The bedrock NAPL containment system was installed in phases since not enough was known of the hydrogeology in fractured bedrock to design a final system. The extraction wells are connected via a force main to the on-site treatment facility. Currently, the bedrock NAPL containment system consists of a total of 17 extraction wells operating around the site. The APL plume containment system consists of two extraction wells placed near the Niagara Gorge that recover APL and prevent it from reaching the Niagara River. These wells were completed in 1994. The construction of the on-site leachate storage, handling, and treatment facility was completed in 1989. APL is treated on-site with activated carbon. NAPL is collected at this facility and transferred to OCC's Main Plant in Niagara Falls for incineration. The Niagara Gorge Face seeps have been remediated. Contaminated sediment was removed and some water diverted into a culvert so that people no longer have access to these seeps. In addition to these remedial measures, an Industrial Protection Program to protect nearby workers from contaminants has been completed. The draft Lake Ontario Dioxin Bioaccumulation Study was completed in 1989, distributed for scientific review and was available to the public in September 1992. Fish and sediment samples from Lake Ontario were collected and analyzed, and laboratory studies were conducted. The community monitoring program, consisting of monitoring wells placed within the community and sampled

quarterly to provide early warning of contamination from Hyde Park indicator chemicals, is ongoing. An assessment was completed in March 1992 to determine the risk of excavating Bloody Run sediments. The risks from excavation, EPA's preferred alternative, were found acceptable and the decision made to excavate the Bloody Run. Excavation was completed in February 1993. The perimeter of the landfill was capped in 1992. The landfill itself was capped in late 1994. OCC upgraded its onsite treatment facility to process 400 gallons per minute in 2002.

OCC, using an extensive monitoring system which was installed at the site during 2001 and 2002, concluded in the *Remedial Characterization Report: Hydrologic Characterization* (June 2003) that the contaminated groundwater surrounding the site was being captured by the extraction well system and the requirements of the RRT were being achieved. OCC conducted a study to determine the relative age of the groundwater near the site and determined that the relative age of the water of the groundwater between the extraction wells and the Niagara Gorge is younger than the groundwater underlying the site. This indicates that the extraction wells are effectively preventing migration of groundwater from the landfill to the Niagara River. The seeps along the Gorge were determined not to be groundwater discharge, but surface runoff, indicating that the APL wells have been effective in controlling the groundwater near the Gorge.

Site Facts: In 1981, the EPA, the Department of Justice, the State, and a potentially responsible party, OCC signed a Consent Decree specifying OCC's responsibilities for cleanup of contamination at the site and maintenance of these remedies. In 1985, the EPA selected the final method to clean up the site. There is intense public scrutiny of activities related to this site. The Canadian government has reviewed all of the program activities.

Cleanup Progress



The cleanup actions at the Hooker-Hyde Park site were completed in June 2003. The removal of contaminated soils and sediments as well as the leachate control and treatment operations have eliminated potential health risks and further environmental degradation.

Remedial construction included the installation of a system of extractions wells, both in the bedrock and overburden, to contain and collect NAPL & APL. A Leachate Treatment Facility was built on-site. Contaminated sediments were removed from Bloody Run.

Approximately 8 million gallons of ground water have been treated on-site; approximately 400,000 gallons of NAPL have been extracted from the site and incinerated; 46,720 tons of contaminated sediments were removed from Bloody Run.

Future Activities:

- OCC will monitor the groundwater surrounding the sites.
- OCC is preparing a report on the groundwater chemistry surrounding the site.

Future remedial activities performed during operation and maintenance include:

- Operation of the ground-water extraction and treatment systems. Approximately 2 billion gallons

- of groundwater will need to be treated over the next 30 years;
- Incineration of NAPL offsite at a facility in Texas.
- Annual inspection of the Niagara Gorge.
- Quarterly groundwater monitoring.

Site Repository



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